

Diagram 10 illustrates a color transformation process. It features a large, empty rectangular box at the top, labeled with the number 10 and an arrow pointing to its bottom-left corner. Below this box, a mathematical equation is presented. The equation shows a vertical column of three primed color components (R', G', B') enclosed in a hexagonal frame, followed by an equals sign. This is followed by a 3x3 matrix of coefficients (r1, g1, b1; r2, g2, b2; r3, g3, b3) also enclosed in a hexagonal frame, and finally a vertical column of three unprimed color components (R, G, B) enclosed in a hexagonal frame.

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = \begin{pmatrix} r_1 & g_1 & b_1 \\ r_2 & g_2 & b_2 \\ r_3 & g_3 & b_3 \end{pmatrix} \begin{pmatrix} R \\ G \\ B \end{pmatrix}$$

Fig. 1 Prior art

| G Values | Output values: $G \cdot g_l$ |
|--|------------------------------|
| 0, 1, 2, 3, 4, 5, 6, 7 | $g_l(0)$ |
| 8, 9, 10, 11, 12, 13, 14, 15 | $g_l(1)$ |
| 16, 17, 18, 19, 20, 21, 22, 23 | $g_l(2)$ |
| \vdots | \vdots |
| 240, 241, 242, 243, 244, 245, 246, 247 | $g_l(30)$ |
| 248, 249, 250, 251, 252, 253, 254, 255 | $g_l(31)$ |

Fig. 2

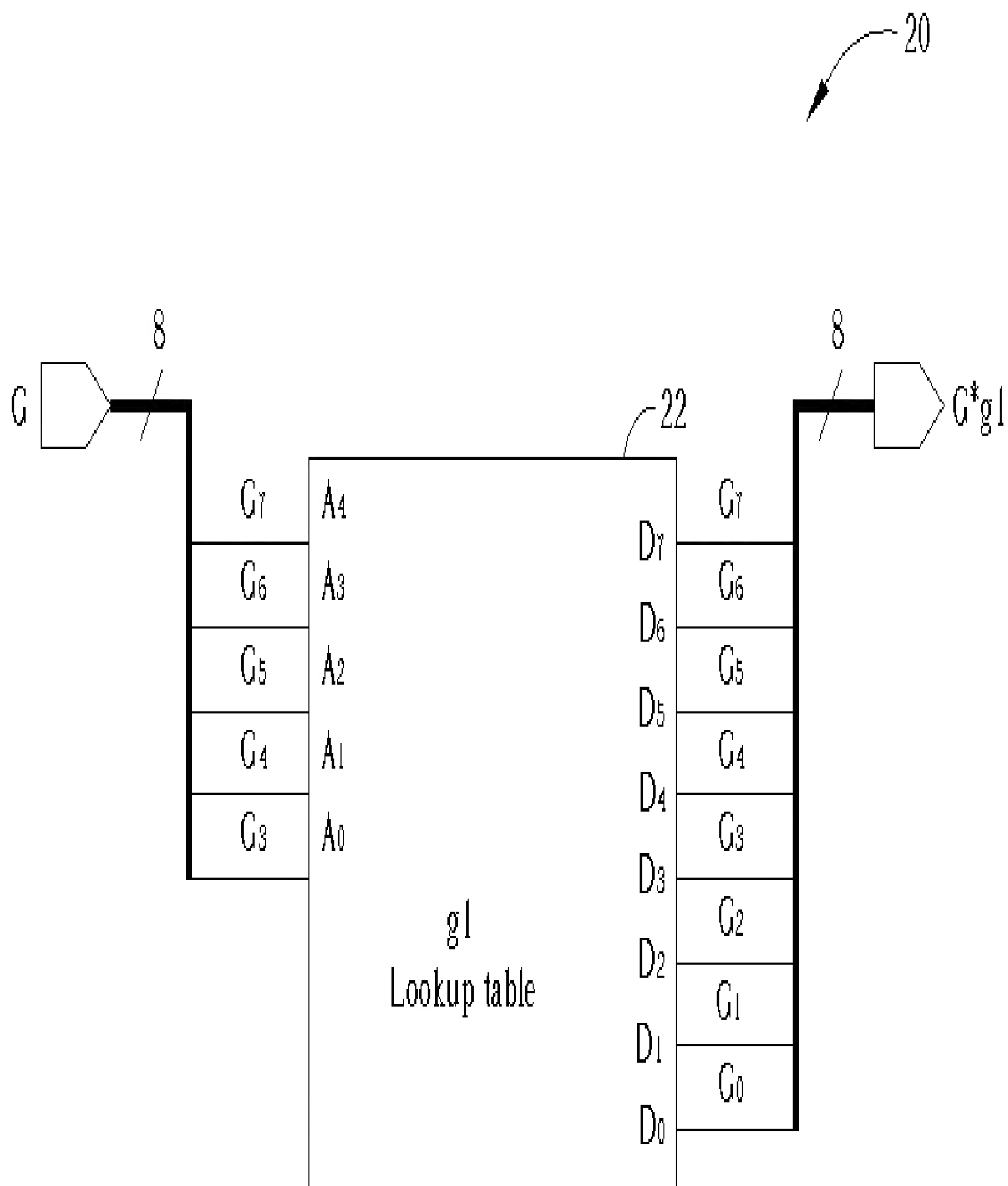


Fig. 3

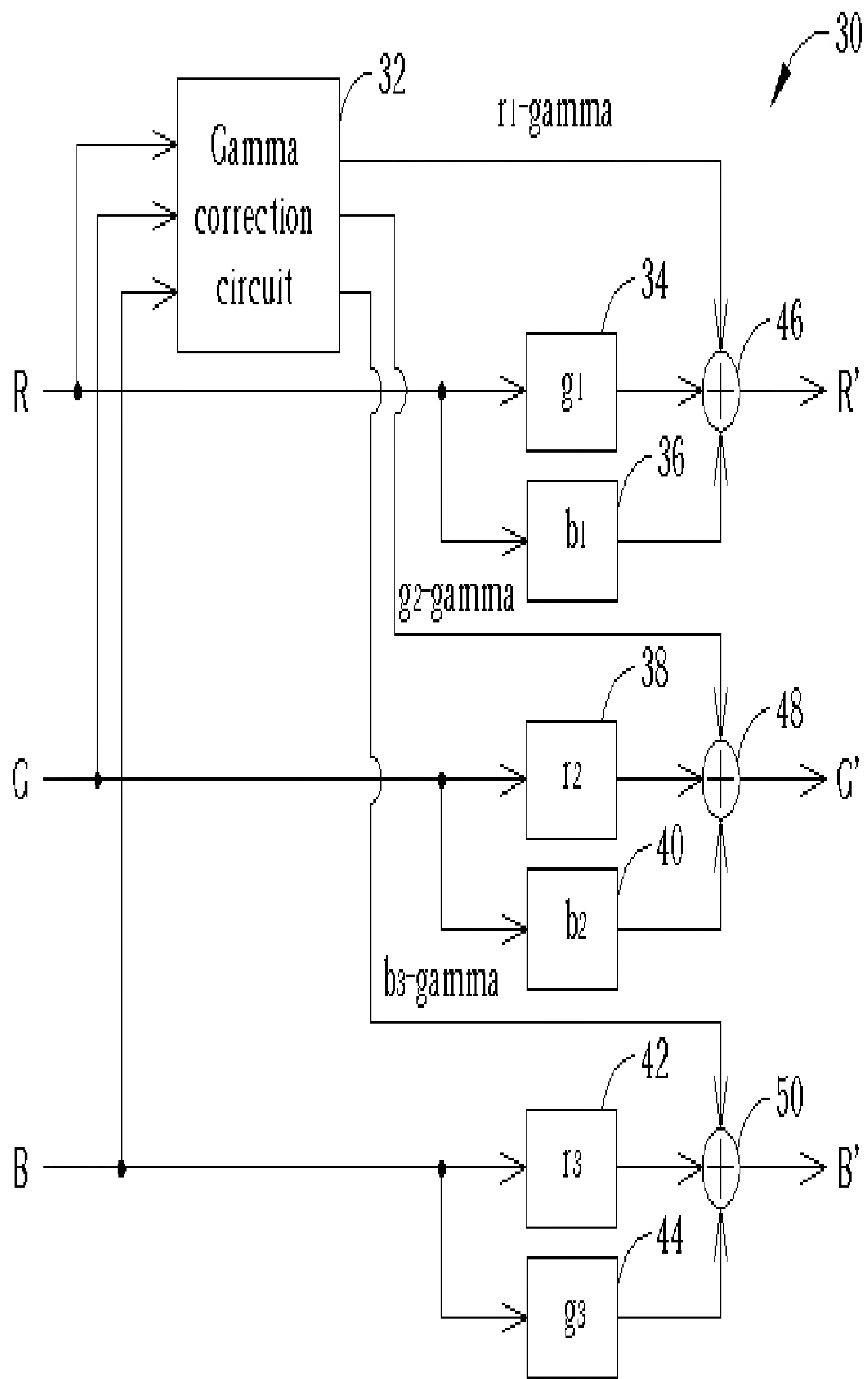


Fig. 4

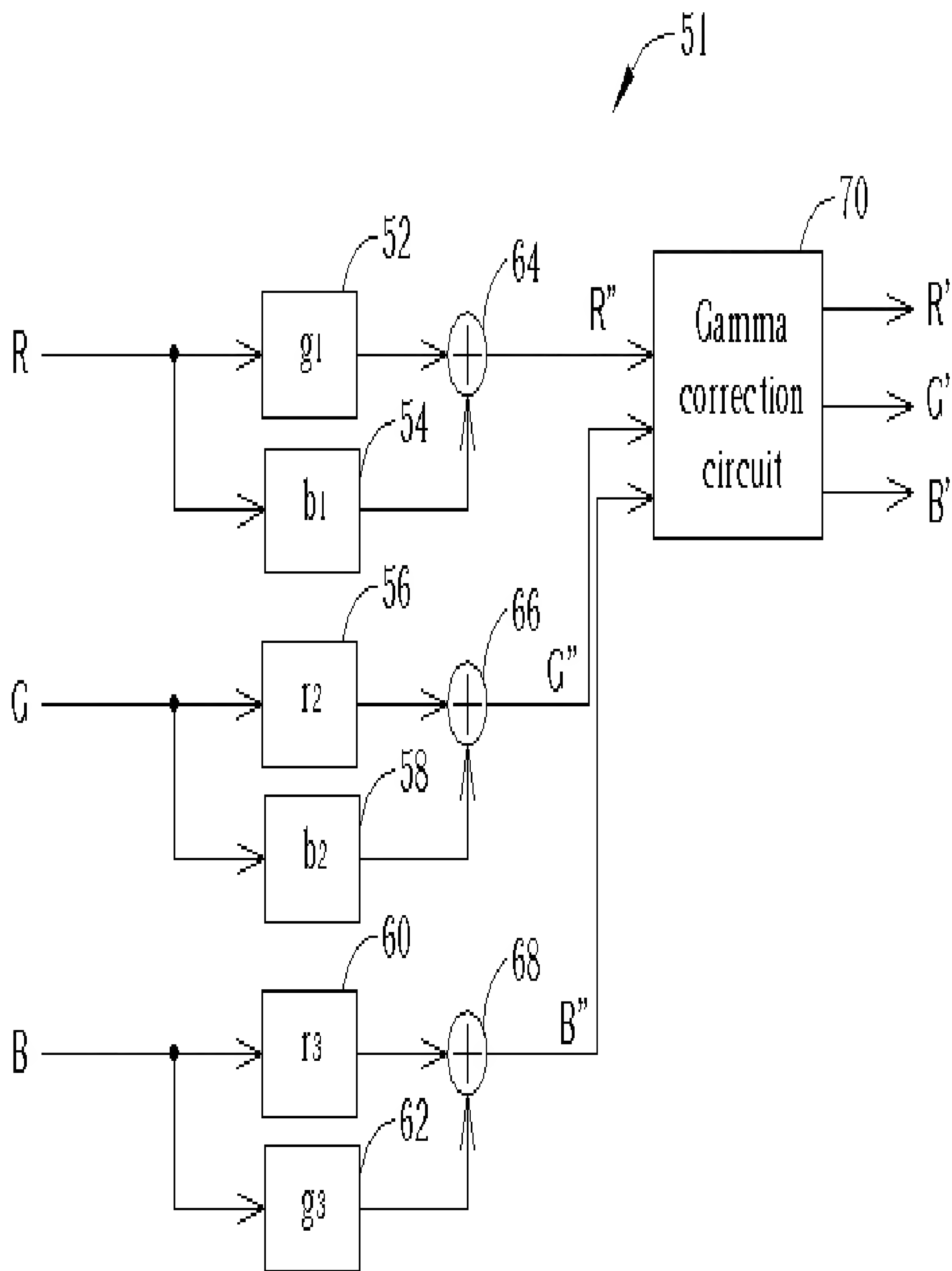


Fig. 5

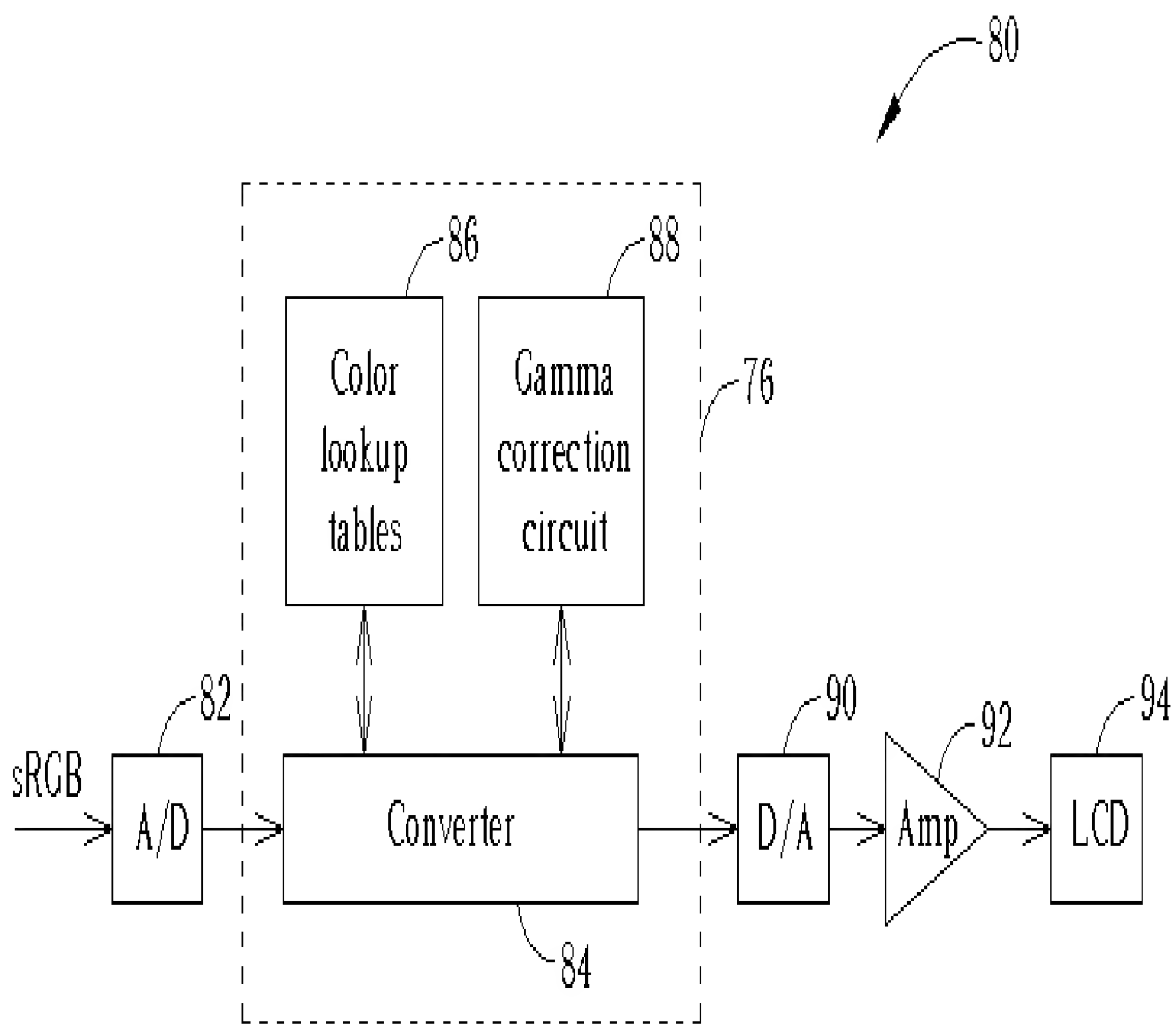


Fig. 6

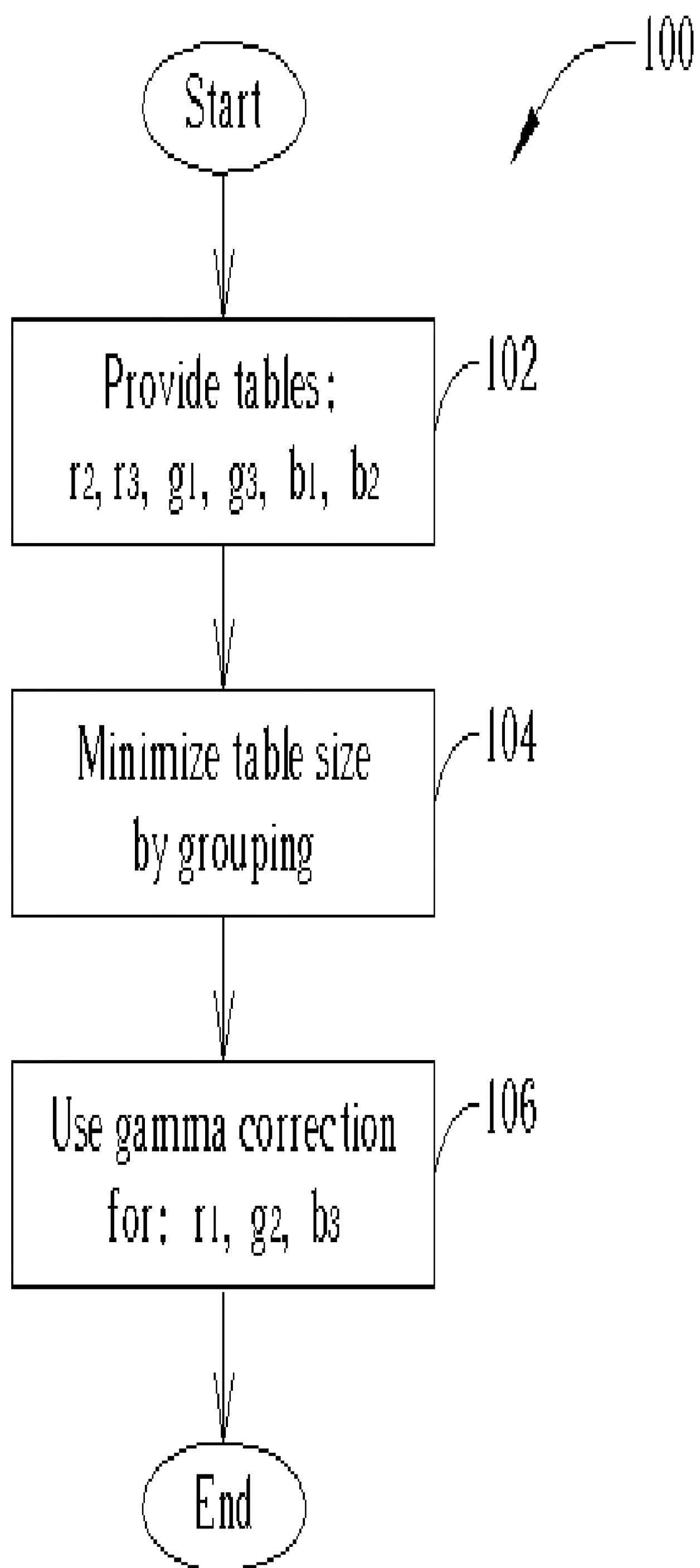


Fig. 7